Qualys Cloud Platform v3.x

API Release Notes

Version 3.2

October 13, 2020

Qualys Cloud Suite API gives you many ways to integrate your programs and API calls with Qualys capabilities. You'll find all the details in our user guides, available at the time of release. Just log in to your Qualys account and go to Help > Resources.

What's New

WAS API: Define keywords for WAS to search and report internal links

AM API: Updated Response for Search Results

AM API: Evaluate Tag API is Deprecated

URL to the Qualys API Server

The Qualys API URL you should use for API requests depends on the Qualys platform where your account is located.

Click here to identify your Qualys platform and get the API URL

This documentation uses the API gateway URL for Qualys US Platform 1 (https://gateway.qg1.apps.qualys.com) in sample API requests. If you're on another platform, please replace this URL with the appropriate gateway URL for your account.

WAS API: Define keywords for WAS to search and report internal links

API affected	/qps/rest/3.0/create/was/optionprofile /qps/rest/3.0/update/was/optionprofile/<id> /qps/rest/3.0/get/was/optionprofile/<id> /qps/rest/3.0/get/was/wasscan/<id> qps/rest/3.0/get/was/finding/ qps/rest/3.0/download/was/report/<id>
New or Updated APIs	Updated API
DTD or XSD changes	Yes

In the Create/Update Option Profile API request, you can now specify keywords in the form of strings and regular expressions to search for URL links that contains the specified keyword. Currently, we search for keywords only in the internal links crawled for each target application being scanned.

To specify keywords (strings or regular expressions), we added a new parameter "keywordsUrlSearch" to the Create/Update Option Profile API. For example, for WAS to report all URLs with the .html extension, specify **.*/([^?]+)data([^?]*?\\.html$** as regular expression.

During a Discovery/Vulnerability scan, we search for these keywords and report all the unique links that contains the specified keywords in the Get Finding Details API output under information gathered QID 150141. Note that we show the crawled links under QID 150009.

Permissions

- You must have the WAS module enabled.

- You must have the "API Access" and "Access WAS module" permissions enabled.

- The web application must be within your scope.

Input Parameters

Parameter	Description
keywordsUrlSearch (Text)	(Optional) Specify keywords in the form of strings and regular expressions to search for URL links that contains the specified keyword. Currently, we search for keywords only in the internal links that are found in the crawling phase for each target application in a Discovery/Vulnerability scan. You can enter a maximum of 10 keywords where each keyword appears on a separate line. A keyword must be a minimum of 5 characters and a maximum of 200 characters.

Sample - Create a new option profile using the "Keywords URL Search" parameter

API request:

```
curl -u "USERNAME:PASSWORD" -H "content-type: text/xml" -X "POST" --data-
binary @-
"https://qualysapi.qualys.com/qps/rest/3.0/create/was/optionprofile/"
< file.xml
```

Note: “file.xml” contains the request POST data.

Request POST Data (file.xml):

```
<ServiceRequest>
    <data>
        <OptionProfile>
            <name>
                <![CDATA[My Option Profile - Regex2]]>
            </name>
            <keywordsUrlSearch>Regex1243
             Regex23456
            </keywordsUrlSearch>
        </OptionProfile>
    </data>
</ServiceRequest>
```

XML output:

```
 <?xml version="1.0" encoding="UTF-8"?>
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://qualysapi.qualys.com/qps/xsd/3.0/wa
s/optionprofile.xsd">
    <responseCode>SUCCESS</responseCode>
    <count>1</count>
    <data>
```

```
            <OptionProfile>
                <id>1049883</id>
                <name>
                    <![CDATA[My Option Profile - Regex]]>
                </name>
                ...
                <sensitiveContent>
                    <creditCardNumber>false</creditCardNumber>
                    <socialSecurityNumber>false</socialSecurityNumber>
                </sensitiveContent>
                <keywordsUrlSearch>Regex1243
                 Regex23456
                </keywordsUrlSearch>
                <createdDate>2020-08-11T13:51:12Z</createdDate>
                ...
            </OptionProfile>
        </data>
    </ServiceResponse>
```

Sample - Update a new Option Profile using the Keywords URL Search parameter

API request:

```
curl -u "USERNAME:PASSWORD" -H "content-type: text/xml" -X "POST" --data-
binary @-
"https://qualysapi.qualys.com/qps/rest/3.0/update/was/optionprofile/83
2265669" < file.xml
```

Note: “file.xml” contains the request POST data.

Request POST Data (file.xml):

```
<ServiceRequest>
    <data>
        <OptionProfile>
            <name>
                <![CDATA[My Option Profile - Regex]]>
            </name>
            <keywordsUrlSearch>
             Regex1243
             Regex23456
             Regex78645
            </keywordsUrlSearch>
        </OptionProfile>
    </data>
</ServiceRequest>
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://qualysapi.qualys.com/qps/xsd/3.0/wa
s/optionprofile.xsd">
 <responseCode>SUCCESS</responseCode>
 <count>1</count>
 <data>
   <OptionProfile>
    <id>832265669</id>
   </OptionProfile>
 </data>
</ServiceResponse>
```

Sample - Get option profile details to view the values set in the keyword url search parameter

API request:

```
curl -u "USERNAME:PASSWORD"
"https://qualysapi.qualys.com/qps/rest/3.0/get/was/optionprofile/1039284"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://qualysapi.qualys.com/qps/xsd/3.0/wa
s/optionprofile.xsd">
    <responseCode>SUCCESS</responseCode>
    <count>1</count>
    <data>
        <OptionProfile>
            <id>1039284</id>
            <name>
                <![CDATA[
                My Option Profile]]></name>
            ...
            <keywordsUrlSearch>
              Regex1243
              Regex1243
              Regex1243
           </keywordsUrlSearch>
           ...
           </lastName>
        </updatedBy>
     </OptionProfile>
   </data>
</ServiceResponse>
```

Sample - Get details of a scan with the keyword url search parameter defined in the option profile

API request:

```
curl -u "USERNAME:PASSWORD"
"https://qualysapi.qualys.com/qps/rest/3.0/get/was/wasscan/3475754"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://qualysapi.qualys.com/qps/xsd/3.0/wa
s/scan.xsd">
    <responseCode>SUCCESS</responseCode>
    <count>1</count>
    <data>
        <WasScan>
            <id>3475754</id>
            <name>
                <![CDATA[My Vulnerability Scan]]>
            </name>
            ...
                    <WasScanOption>
                        <name>Unexpected Error Threshold</name>
                        <value>
                            <![CDATA[300]]>
                        </value>
                    </WasScanOption>
                    <WasScanOption>
                        <name>Keywords URL Search</name>
                        <value>
                            <![CDATA[regression
                            .*/([^?]+)data([^?]*?\\.html$)]]>
                        </value>
                    ...
        </WasScan>
    </data>
</ServiceResponse>
```

Sample - Get details of a finding

The sample finding shows the links that matches the keywords under QID 150141.

API request:

```
curl -u "USERNAME:PASSWORD"
"https://qualysapi.qualys.com/qps/rest/3.0/get/was/finding/"
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="http://qualysapi.qualys.com/qps/xsd/3.0/wa
s/finding.xsd">
    <responseCode>SUCCESS</responseCode>
    <count>1</count>
    <data>
        <Finding>
            <id>681806</id>
            <uniqueId>69ee5214-8f1f-4389-8030-8cc258e5ddc6</uniqueId>
            <qid>150141</qid>
            <name>
                <![CDATA[List of links/files identified by regex(s)
                  provided by customer.]]>
            </name>
            <type>INFORMATION_GATHERED</type>
            <findingType>QUALYS</findingType>
            <group>INFO</group>
            <resultList>
                <count>1</count>
                <list>
                    <Result>
                        <authentication>false</authentication>
                        <payloads>
                            <count>1</count>
                            <list>
                                <PayloadInstance>
                                    <response>
                                        <![CDATA[
Regex: .*/([^?]+)data([^?]*?\\.html$)
No internal link found matching with this regex.


Regex: regression
List of internal links matching with this regex are:
http://10.11.68.80/cassium/regression/links/was-3216-airfrance-
crawl/airfrance/ seen at following parent(s)
http://10.11.68.80/cassium/regression/links/was-3216-airfrance-
crawl/airfrance/af-envol.er4di.com/
http://10.11.68.80/cassium/regression/links/was-3216-airfrance-
crawl/airfrance/af-envol.er4di.com/get0ab4.html seen at following
parent(s)
...
http://10.11.68.80/cassium/regression/links/was-3216-airfrance-
crawl/airfrance/af-envol.er4di.com/
http://10.11.68.80/cassium/regression/links/was-3216-airfrance-
crawl/airfrance/af-envol.er4di.com/getf987.html seen at following
```

```
parent(s)
http://10.11.68.80/cassium/regression/links/was-3216-airfrance-
crawl/airfrance/af-envol.er4di.com/
]]>
                                        </response>
                                    </PayloadInstance>
                                </list>
                            </payloads>
                        </Result>
                    </list>
            ...
             </Finding>
    </data>
</ServiceResponse>
```

Sample - WAS Scan Report in XML format

The WAS Scan Report in (Online/PDF/HTML/XML/CSV) format shows under the Appendix > Option Profile Details the URL search keywords in the <SEARCH_KEYWORDS> element.

API request:

```
curl -u "USERNAME:PASSWORD"
"https://qualysapi.qualys.com/qps/rest/3.0/download/was/report/1302"
```

XML output:

```
<?xml version='1.0' encoding='UTF-8'?>
<WAS_SCAN_REPORT>
    <HEADER>
        <NAME>Scan Report</NAME>
        <DESCRIPTION>Vulnerabilities of all selected scans are
consolidated into one report so that you can view their
evolution.</DESCRIPTION>
        <GENERATION_DATETIME>29 Jul 2020 02:05PM
GMT+0530</GENERATION_DATETIME>
        ...
<APPENDIX>
  ...
        <OPTION_PROFILE_DETAILS>
            ...
<INCLUSION_SEARCH_LIST_QIDS>150141</INCLUSION_SEARCH_LIST_QIDS>
           <CREDIT_CARD_NUMBERS_SEARCH>false</CREDIT_CARD_NUMBERS_SEARCH>

<SOCIAL_SECURITY_NUMBERS_US_SEARCH>false</SOCIAL_SECURITY_NUMBERS_US_SEAR
CH>

<CUSTOM_SENSITIVE_CONTENT_SEARCH>Off</CUSTOM_SENSITIVE_CONTENT_SEARCH>
           <SEARCH_KEYWORDS><![CDATA[regression
.*/([^?]+)data([^?]*?\\.html$)]]></SEARCH_KEYWORDS>
```

```
        </OPTION_PROFILE_DETAILS>
        ....
                    <SEVERITY_LEVEL>
                        <SEVERITY>3</SEVERITY>
                        <LEVEL>Serious</LEVEL>
                      <DESCRIPTION>Intruders may be able to detect highly
sensitive data, such as personally identifiable information (PII) about
other users of the web application.</DESCRIPTION>
                    </SEVERITY_LEVEL>
                </SEVERITY_LEVEL_LIST>
            </SEVERITY_CATEGORY>
        </SEVERITY_CATEGORY_LIST>
    </APPENDIX>
</WAS_SCAN_REPORT>
```

XSD Update

optionprofile.xsd

Changes in optionprofile.xsd (<platform API server>/qps/xsd/3.0/was/optionprofile.xsd). Added a new element <keywordsUrlSearch in>.

```
<?xml version="1.0" encoding="UTF-8"?>
...
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
type="SearchListlist" minOccurs="0"/>
                    <xs:element name="enableXssPayloads" type="xs:boolean"
minOccurs="0"/>
                 </xs:sequence>
            </xs:complexType>
         </xs:element>
         <xs:element name="sensitiveContent" minOccurs="0">
            <xs:complexType>
               <xs:sequence>
                  <xs:element name="creditCardNumber" type="xs:boolean"
minOccurs="0"/>
                <xs:element name="socialSecurityNumber" type="xs:boolean"
minOccurs="0"/>
                  <xs:element name="customContents" type="xs:string"
minOccurs="0"/>
               </xs:sequence>
            </xs:complexType>
         </xs:element>
            <xs:element name="keywordsUrlSearch" type="xs:string"
            minOccurs="0"/>
            <xs:element name="comments" type="CommentList"
            minOccurs="0"/>
            ...
                </xs:complexType>
            </xs:element>
```

```
            </xs:all>
        </xs:complexType>
    </xs:schema>
```

wasscan.xsd

Changes in wasscan.xsd (<platform API server>/qps/xsd/3.0/was/wasscan.xsd). Added a new enumeration value "Keywords URL Search".

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
    xmlns:xs="http://www.w3.org/2001/XMLSchema"
    elementFormDefault="qualified">

    <!-- REQUEST -->
    ...
        </xs:all>
    </xs:complexType>

    <xs:complexType name="WasScanOptionList">
        <xs:all>
            <xs:element name="count" type="xs:int"/>
            <xs:element name="list" minOccurs="0" >
                <xs:complexType>
                    <xs:sequence>
                        <xs:element name="WasScanOption"
type="WasScanOption" minOccurs="0" maxOccurs="unbounded"/>
                    </xs:sequence>
                </xs:complexType>
            </xs:element>
        </xs:all>
    </xs:complexType>

    <xs:complexType name="WasScanOption">
        <xs:all>
            <xs:element name="name">
                <xs:simpleType>
                    <xs:restriction base="xs:string">
                        <xs:enumeration value="Web Application Name"/>
                        <xs:enumeration value="Web Application
Authentication Record Name"/>
                        <xs:enumeration value="Target URL"/>
                        <xs:enumeration value="Option Profile Name"/>
                       <xs:enumeration value="Crawling Form Submissions"/>
                        <xs:enumeration value="Maximum Crawling Links"/>
                        <xs:enumeration value="User Agent"/>
                        <xs:enumeration value="Request Parameter Set"/>
                        <xs:enumeration value="Performance Settings"/>
                        <xs:enumeration value="Sensitive Content: Credit
```

```
                        Card Numbers"/>
                        <xs:enumeration value="Sensitive Content: Social
Security Numbers (US)"/>
                        <xs:enumeration value="Sensitive Content: Custom
                        Contents"/>
                        <xs:enumeration value="Detection Scope"/>
                        <xs:enumeration value="Detection List Names"/>
                        <xs:enumeration value="Detection Count QIDs
                          included"/>
                     <xs:enumeration value="Exclusion List Names"/>
                     <xs:enumeration value="Detection QIDs excluded"/>
                        <xs:enumeration value="Bruteforce Settings"/>
                        <xs:enumeration value="Bruteforce Attempts"/>
                        <xs:enumeration value="Bruteforce List Name"/>
                        <xs:enumeration value="Cancel After N Hours"/>
                        <xs:enumeration value="Scanner Appliance"/>
                      <xs:enumeration value="Unexpected Error Threshold"/>
                        <xs:enumeration value="Timeout Error Threshold"/>
                        <xs:enumeration value="Keywords URL Search"/>
                     </xs:restriction>
                  </xs:simpleType>
               </xs:element>
               <xs:element name="value" type="Cdata" />
            </xs:all>
         </xs:complexType>
....
```

AM API: Updated Response for Search Results

API affected	/qps/rest/2.0/search/am/hostasset/ /qps/rest/2.0/search/am/asset/ /qps/rest/2.0/search/am/tag
New or Updated APIs	Updated API
DTD or XSD changes	No

We have now changed our response to provide you with accurate search results. The response now always includes `hasMoreRecords` and `lastId` parameters in the response. Even if the returned response does not have entities listed as per the filter criteria, the parameters are included in the response. In the earlier behavior, if any intermediate batch did not return data due to fields filter OR if it request criteria had no matching records, the `hasMoreRecords` and `lastId` parameters were not included in the response.

Permissions

Managers with full scope, other users must have these permissions: Access Permission "API Access" and Asset Management Permission "Read Asset".

Examples

Let us see various scenarios where the response may or may not include the data matching the search criteria specified in the request.

Sample - Search Tags

Sample - Search Assets (Response includes data matching search critieria)

Sample - Search Assets (Response without data matching search critieria)

Sample - Search Host Assets (Response includes data matching search critieria)

Sample - Search Host Assets (Response without data matching search critieria)

Sample - Search Tags

Let us see the response when the account has 4 tags and the results are limited to 3.

API request:

```
curl -u "USERNAME:PASSWORD" -H "content-type: text/xml" -X "POST" --data-
binary @-
"https://qualysapi.qualys.com/qps/rest/2.0/search/am/tag" < file.xml
```

Note: "file.xml" contains the request POST data.

Request POST Data (file.xml):

```
<ServiceRequest>
   <preferences>
        <limitResults>3</limitResults>
    </preferences>
    <filters>
    </filters>
</ServiceRequest>
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="https://qualysapi.qualys.com/qps/xsd/2.0/a
m/tag.xsd">
    <responseCode>SUCCESS</responseCode>
    <count>0</count>
    <hasMoreRecords>true</hasMoreRecords>
    <lastId>10449935</lastId>
    <data>
        <Tag>
            <ruleText>1.0.0.0-9.255.255.255,11.0.0.0-
100.63.255.255,100.128.0.0-126.255.255.255,128.0.0.0-
169.253.255.255,169.255.0.0-172.15.255.255,172.32.0.0-
191.255.255.255,192.0.1.0-192.0.1.255,192.0.3.0-
192.88.98.255,192.88.100.0-192.167.255.255,192.169.0.0-
198.17.255.255,198.20.0.0-198.51.99.255,198.51.101.0-
203.0.112.255,203.0.114.0-223.255.255.255</ruleText>
        </Tag>
    </data>
</ServiceResponse>
```

Sample - Search Assets (Response includes data matching search critieria)

Let us view the response when the response includes entities listed in the search critieria.

API request:

```
curl -u "USERNAME:PASSWORD" -H "content-type: text/xml" -X "POST" --data-
binary @-
"https://qualysapi.qualys.com/qps/rest/2.0/search/am/asset" < file.xml
```

Note: “file.xml” contains the request POST data.

Request POST Data (file.xml):

```
<ServiceRequest>
<preferences>
      <limitResults>3</limitResults>
</preferences>
<Criteria field="trackingMethod" operator="EQUALS">INSTANCE_ID</Criteria>
 <filters>
 </filters>
</ServiceRequest>
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="https://qualysapi.qualys.com/qps/xsd/2.0/a
m/asset.xsd">
   <responseCode>SUCCESS</responseCode>
    <count>3</count>
    <hasMoreRecords>true</hasMoreRecords>
    <lastId>5693290</lastId>
    <data>
        <Asset>
            <id>5688949</id></ServiceResponse>
....
            <modified>2020-07-14T13:29:19Z</modified>
            <type>HOST</type>
        </Asset>
    </data>
</ServiceResponse>
```

Sample - Search Assets (Response without data matching search critieria)

Let us view the response when the response does not include entities listed in the search critieria.

API request:

```
curl -u "USERNAME:PASSWORD" -H "content-type: text/xml" -X "POST" --data-
binary @-
"https://qualysapi.qualys.com/qps/rest/2.0/search/am/asset" < file.xml
```

Note: “file.xml” contains the request POST data.

Request POST Data (file.xml):

```
<ServiceRequest>
<preferences>
      <limitResults>3</limitResults>
</preferences>
<Criteria field="trackingMethod" operator="EQUALS">INSTANCE_ID</Criteria>
 <filters>
 </filters>
</ServiceRequest>
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="https://qualysapi.qualys.com/qps/xsd/2.0/a
m/asset.xsd">
       <responseCode>SUCCESS</responseCode>
    <count>0</count>
    <hasMoreRecords>true</hasMoreRecords>
    <lastId>5693290</lastId>
</ServiceResponse>
```

Sample - Search Host Assets (Response includes data matching search critieria)

Let us view the response when the response includes entities listed in the search critieria.

API request:

```
curl -u "USERNAME:PASSWORD" -H "content-type: text/xml" -X "POST" --data-
binary @-
"https://qualysapi.qualys.com/qps/rest/2.0/search/am/hostasset" <
file.xml
```

Note: “file.xml” contains the request POST data.

Request POST Data (file.xml):

```
<ServiceRequest>
<preferences>
      <limitResults>3</limitResults>
</preferences>
<Criteria field="trackingMethod" operator="EQUALS">INSTANCE_ID</Criteria>
 <filters>
 </filters>
</ServiceRequest>
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="https://qualysapi.qualys.com/qps/xsd/2.0/a
m/hostasset.xsd">
   <responseCode>SUCCESS</responseCode>
    <count>3</count>
    <hasMoreRecords>true</hasMoreRecords>
    <lastId>5693290</lastId>
    <data>
        <HostAsset>
            <id>5688949</id>
            <name>Sample_name</name>
            <created>2020-07-10T06:21:26Z</created>
            <modified>2020-08-12T09:12:09Z</modified>....
            <modified>2020-07-14T13:29:19Z</modified>
            <type>HOST</type>
...
            </HostAsset>
    </data>
</ServiceResponse>
```

Sample - Search Host Assets (Response without data matching search critieria)

Let us view the response when the response does not include entities listed in the search critieria.

API request:

```
curl -u "USERNAME:PASSWORD" -H "content-type: text/xml" -X "POST" --data-
binary @-
"https://qualysapi.qualys.com/qps/rest/2.0/search/am/hostasset" <
file.xml
```

Note: “file.xml” contains the request POST data.

Request POST Data (file.xml):

```
<ServiceRequest>
<preferences>
      <limitResults>3</limitResults>
</preferences>
<Criteria field="trackingMethod" operator="EQUALS">INSTANCE_ID</Criteria>
 <filters>
 </filters>
</ServiceRequest>
```

XML output:

```
<?xml version="1.0" encoding="UTF-8"?>
<ServiceResponse xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="https://qualysapi.qualys.com/qps/xsd/2.0/a
m/hostasset.xsd">
 <responseCode>SUCCESS</responseCode>
    <count>0</count>
    <hasMoreRecords>true</hasMoreRecords>
    <lastId>5693290</lastId>
</ServiceResponse>
```

AM API: Evaluate Tag API is Deprecated

API affected	/qps/rest/2.0/evaluate/am/tag/<id> /qps/rest/2.0/evaluate/am/tag
New or Updated APIs	No
DTD or XSD changes	No

The Evaluate Tag API will now be deprecated. The API was available for subscriptions that support Dynamic tagging and forced re-evaluation of one or more tags. However, now tags are automatically queued for evaluation when their dynamic rule is updated or a new dynamic tag is created.